



## CLASSIFICATION OF URGENCY OF CAESAREAN SECTION – A CONTINUUM OF RISK

### Purpose

- A. To encourage **universal** use of a nationally accepted classification of urgency of caesarean section with the aim of:
- facilitating local and national data collection
  - minimising communication difficulties relating to urgency of delivery, between and within teams
  - facilitating retrospective audit of outcomes.
- B. To formalise the concept that urgency of caesarean section represents a **continuum of risk**:
- four broad categories of risk are defined
  - all staff should be aware that, within each category, **the degree of risk in individual cases can vary**
  - a coloured spectrum is used to emphasise that continuum of risk
  - this variance in degree of risk requires an individual, case-by-case approach in deciding the specific decision-to-delivery interval (DDI).

### Issues

#### *Classification*

It is acknowledged that the traditional classification of caesarean section into 'elective' and 'emergency' is of limited value for data collection and audit of obstetric and anaesthetic outcomes. This is because the spectrum of urgency that occurs in obstetrics is lost within a single 'emergency' category. The National Confidential Enquiry into Patient Outcome and Death (NCEPOD) classification, used for other surgical procedures, is not immediately applicable to caesarean section. In 2000, Lucas *et al.*<sup>1</sup> proposed a new classification based on clinical definitions. They demonstrated that this performed better than classifications which relied upon visual analogue scales, assessment of maximum time to delivery, a five-point verbal rating scale or consideration of suitable anaesthetic technique. Importantly, the clinical definitions-based classification proved useful and reliable in clinical practice. The classification has not been adopted universally, making inter-unit comparisons of outcome difficult. In a recent paper, Kinsella and Scrutton<sup>2</sup> confirmed that modification of the wording of the definitions did not improve the consistency of assignment of urgency. Dupuis *et al.*<sup>3</sup> used a three-colour code for categorising risk and suggested that this could shorten the DDI for emergency caesarean section.

#### *Urgency*

The 'Sentinel' caesarean section audit suggested that in cases such as cord prolapse, a DDI of 15 minutes was feasible.<sup>4</sup> However, in many category-1 cases, delivery within 30 minutes was not achieved.<sup>4</sup> Delivery within 75 minutes does not appear to increase the risk of compromise, while delivery within 30 minutes may not always result in a good neonatal outcome.<sup>5,6</sup> Once a decision to deliver has been made, therefore, delivery

should be carried out with an urgency **appropriate to the risk to the baby and the safety of the mother**. Units should strive to design guidelines that result in the shortest safely achievable DDI. Evidence suggests that any delay is usually associated with the delay in transfer to theatre.<sup>7</sup>

**A target DDI for caesarean section for ‘fetal compromise’ of 30 minutes** is an audit tool that allows testing of the efficiency of the whole delivery team and has become accepted practice; however:

- certain clinical situations will require a much quicker DDI than 30 minutes and units should work towards improving their efficiency
- undue haste to achieve a short DDI can introduce its own risk, both surgical and anaesthetic, with the potential for maternal and neonatal harm.<sup>8</sup>

### Communication


Good communication is central to timely delivery of the fetus, while avoiding unnecessary risk to the mother. The time taken for a patient to reach the operating theatre is a critical predictor of the DDI.<sup>7</sup>

- Communication is frequently highlighted as an area for improvement in obstetric practice.
- **All members** of the multidisciplinary team must be informed of the need (or likely need) for caesarean delivery as early as possible, as well as specific instructions on the degree of urgency.
- Communication must ensure that all tasks and preparations for caesarean section that can be performed **concurrently** should be done so and that, where appropriate, roles are **interchangeable**.<sup>7</sup>
- Communication could be more effective using a classification that confers a more precise and individual approach to degree of urgency.
- Categorisation of risk should be reviewed by the multidisciplinary team when the mother arrives in the operating theatre.

### Proposed classification

A classification relating the degree of urgency to the presence or absence of maternal or fetal compromise is illustrated in Figure 1. It incorporates a modified version of the classification proposed by Lucas *et al.*<sup>1</sup> The colour scale reinforces the need to recognise that a ‘continuum of urgency’ applies to caesarean section, rather than discrete categories. However, it is recognised that, for audit purposes, the use of the four defined categories remains useful. Once a category is applied to an individual caesarean section, all members of the team can have a common understanding of the degree of urgency of the procedure for that specific case.

**Figure 1. A classification relating the degree of urgency to the presence or absence of maternal or fetal compromise**

	Urgency	Definition	Category
	Maternal or fetal compromise	Immediate threat to life of woman or fetus	1
		No immediate threat to life of woman or fetus	2
No maternal or fetal compromise	Requires early delivery	3	
	At a time to suit the woman and maternity services	4	

### Benefits

Universal use of an evidence-based classification for categorising urgency of caesarean section which acknowledges a ‘continuum of risk’ has the following benefits:

- it uses a pre-existing classification which is familiar to many units and has been endorsed by the RCOG, Royal College of Anaesthetists, the Obstetric Anaesthetists’ Association, the Centre for Maternal and Child Enquiries and the Clinical Negligence Scheme for Trusts

- it recognises and promotes **four** different categories of urgency, in contrast to the traditional classification of emergency and elective
- it helps to identify **specific** cases requiring 'immediate' delivery (category 1)
- it encourages the clinical team to individualise risk within a given category by inclusion of the colour spectrum
- it may reduce potential maternal risks (for instance, by avoidance of general anaesthesia in the majority of cases in categories 2-4 and in some cases of category 1)
- it avoids time-based definitions
- it can be integrated with the colour-coded systems presently used in some units.

## Audit

The use of a universal classification:

- would allow comparison of local and national audit of obstetric and anaesthetic practice, complications and outcomes
- may be used to inform on reasonable and achievable DDI in the future
- does not prevent units from using the 30-minute DDI for audit purposes, as recommended in standard 12 of the joint working party report, *Standards for Maternity Care*,<sup>9</sup> particularly when it is considered that use of such is more closely reflective of local practice.

## Recommendations

- A. Units are encouraged to adopt the Lucas classification of urgency of caesarean section, which uses four categories of urgency without specific time constraints. The concept that there is a continuum of risk is emphasised by addition of the colour spectrum. An individualised approach to assessment of urgency of delivery is required in all cases.
- B. Clear channels of communication are vital in cases requiring emergency caesarean section. Units should define the roles of each member of the multidisciplinary team to facilitate communication and effective management. This is particularly important in those cases defined as category 1 (requiring 'immediate' delivery). The categorisation of risk should be reviewed by the clinical team when the mother arrives in the operating theatre.
- C. To 'test' local channels of communication, units should consider introducing a formal drill for 'emergency caesarean section' in their in-house teaching programmes. Such a drill could run from 'decision made for caesarean section' to 'arrival and preparation in theatre'. Again, this is particularly relevant to cases defined as category 1.

## References

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6. Thomas J, Paranjothy S, James D. National cross sectional survey to determine whether the decision to delivery interval is critical in emergency caesarean section. *BMJ* 2004;328:665-9.
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The RCOG will maintain a watching brief  
on the need to review this guidance